

## КУБОК МОСКВЫ ПО ПАЗЛСПОРТУ

9 декабря 2012

90 minutes

### INSTRUCTION BOOKLET

1. FUTOSHIKI	33 pt
2. DIWORD	43 pt
3. DIKURO	8 pt
4. DIMAGIC	11 pt
5. DIOXIDES	22 pt
6. FIRS	65 pt
7. EASY AS CUP	12 + 12 + 12 pt
8. TRIAD	10 + 10 + 10 pt
9. TRID ON TETRAHEDRON	18 + 18 + 18 + 18 pt
10. SNAKE	13 + 15 pt
11. PENTOMINO	36 + 61 pt
12. FIVE SHIPS	10 + 22 pt
13. MINESWEEPER	13 + 10 pt
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TOTAL	500 pt

**TIME BONUS** 5,5 points per each saved minute if all the puzzles are solved correctly

#### About Moscow Puzzle Cup 2012

In round 1 participants will solve 8 Futoshiki on Mobius strip. Eight on the logotype of Cup represents this puzzle. Each Futoshiki on Mobius strip has a common part with the pair of neighbors.

Round 2 include puzzles whose names begin with the letters Di. Most puzzle types of this tour you know from the September's Contest 2012 on LMI.

In Triathlon round puzzlers will solve Firs, Easy as CUP and Triad, each of which consisting 3 grids.

In round 4 must be solved puzzle Trid on each face of tetrahedron. Circles on the edges of tetrahedron are shared for two Trids, and on his tops – for three. This puzzle I recommend to solve on the paper of A3 format.

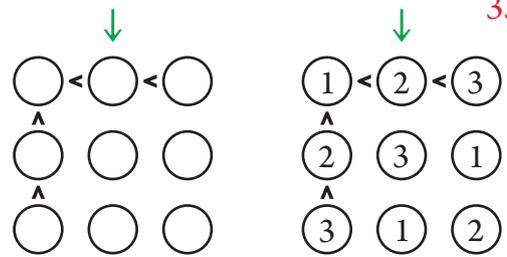
Round 5 is composed of classic puzzles.

Moscow Cup finalists will solve puzzles encountered in the qualifying rounds.

Riad Khanmagomedov

### 1. FUTOSHIKI

Place numbers from 1 to 8 (3 in the example) in circles such that every row and column contains each number exactly once. Inequality constraints must be satisfied.



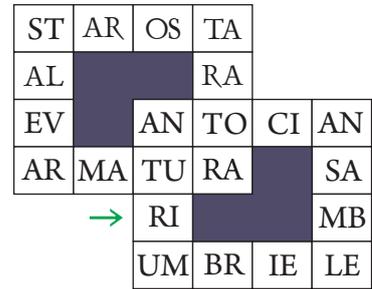
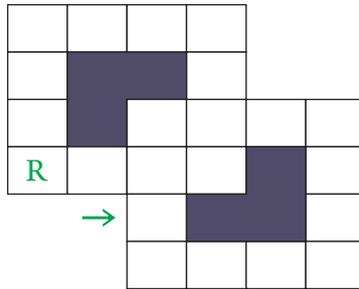
33 pt

**Answer format:** Write the content (8 digits) of marked column from top to bottom. For the given example the answer (3 digits) would be: 231.

### 2. DIWORD

Place in the grid all words from left to right and from top to bottom. Write 2 letters in each cell. One letter (first or second) is given.

- ANSAMBLE
- ANTOCIAN
- ANTURIUM
- ARMATURA
- STALEVAR
- STAROSTA
- TARATORA
- UMBRIELE

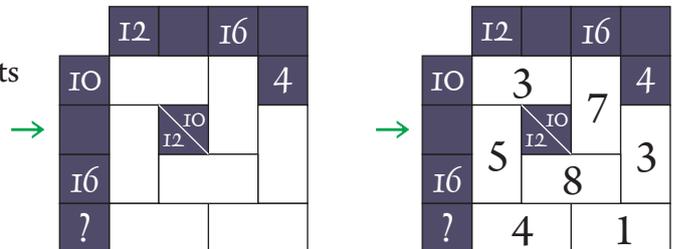


43 pt

**Answer format:** Write the content (8 letters) of marked row from left to right. For the given example the answer (4 letters) would be: RIMB.

### 3. DIKURO

Fill in the white cells with digits 1-8. The sum of digits in continuous one row/column equal to the number at the beginning of row/column. The digits in one sum cannot repeat.

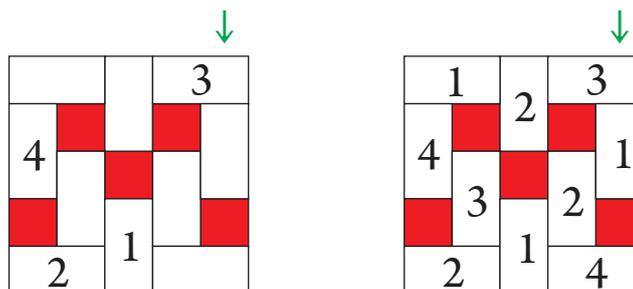


8 pt

**Answer format:** Write the content (5 digits) of marked row from left to right. For the given example the answer (3 digits) would be: 573.

### 4. DIMAGIC

Fill in all white cells with digits 1-6 (1-4 in the example) which cannot repeat in rows and columns.



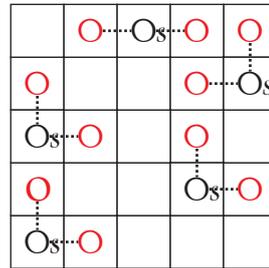
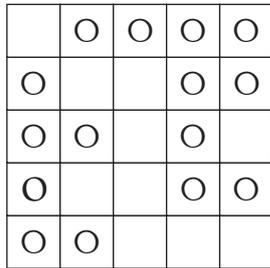
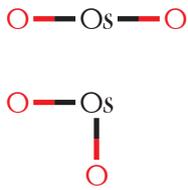
11 pt

**Answer format:** Write the content (5 digits) of marked column from top to bottom. For the given example the answer (3 digits) would be: 314.

### 5. DIOXIDES

22 pt

Place letter “s” in 16 cells (5 in the example) with letter “O”. Cells with Os (osmium atom) cannot touch each other not even diagonally. These, along with the 2 other oxygen atoms O, will form 16 (5 in the example) osmium dioxides having the given shapes.

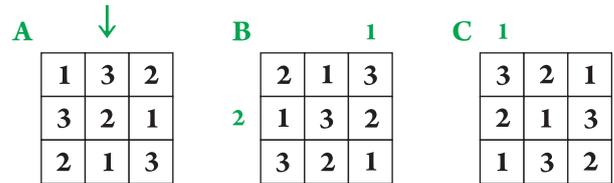
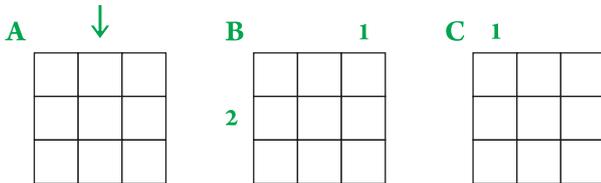


**Answer format:** Write the number of right-angled dioxides.  
For the given example the answer would be: 4.

### 6. FIRS

65 pt

Every row and column of each grid must contain firs of different heights from 1 to 6 (3 in the example). Numbers outside the grid show the quantity of the firs visible in the corresponding directions: fir is visible if no higher firs before it. Every year all firs with height of 6 are chopped down. On the grid **A** there is the forest before chopping. On the **B** – after 1 year: all trees are higher on 1 and firs of height 1 instead of chopped trees. On the grid **C** the forest 1 more year later: again all trees are higher and new firs instead of chopped.

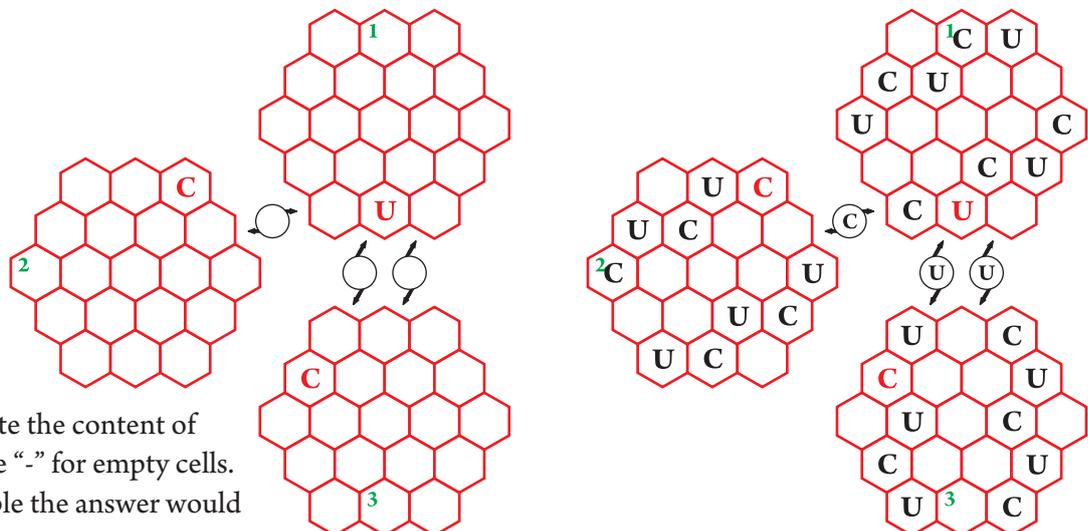


**Answer format:** Write the content of marked column from top to bottom.  
For the given example the answer would be: 321.

### 7. EASY AS CUP

12 pt per each grid

Write letters C, U, P (C, U in the example) in some cells and all circles. Each row in all 3 directions of every grid should have each letter exactly once. Letter in a circle should indicate the first visible letter in the marked directions.

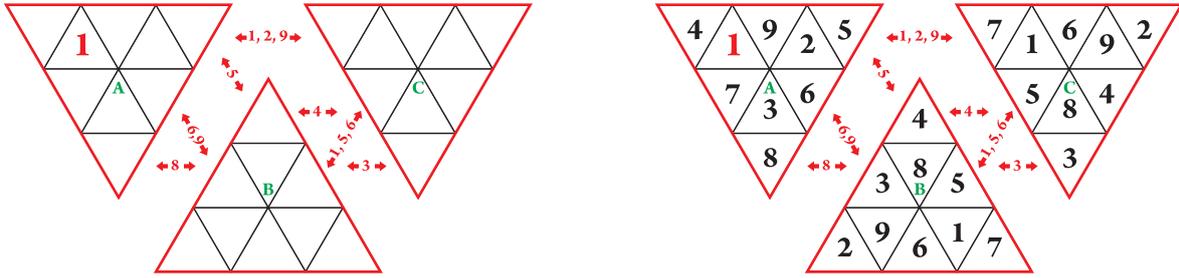


**Answer format:** Write the content of cells with 1, 2, 3. Use “-” for empty cells.  
For the given example the answer would be: 1C, 2C, 3-.

### 8. TRIAD

10 pt per each grid

Place in the triangular cells of every grid the numbers from 1 to 9, each once. In cells with a common side may write only numbers that differ by at least 3. Each number outside of the grids show that it will meet the arrows directions (in two nearest grids).



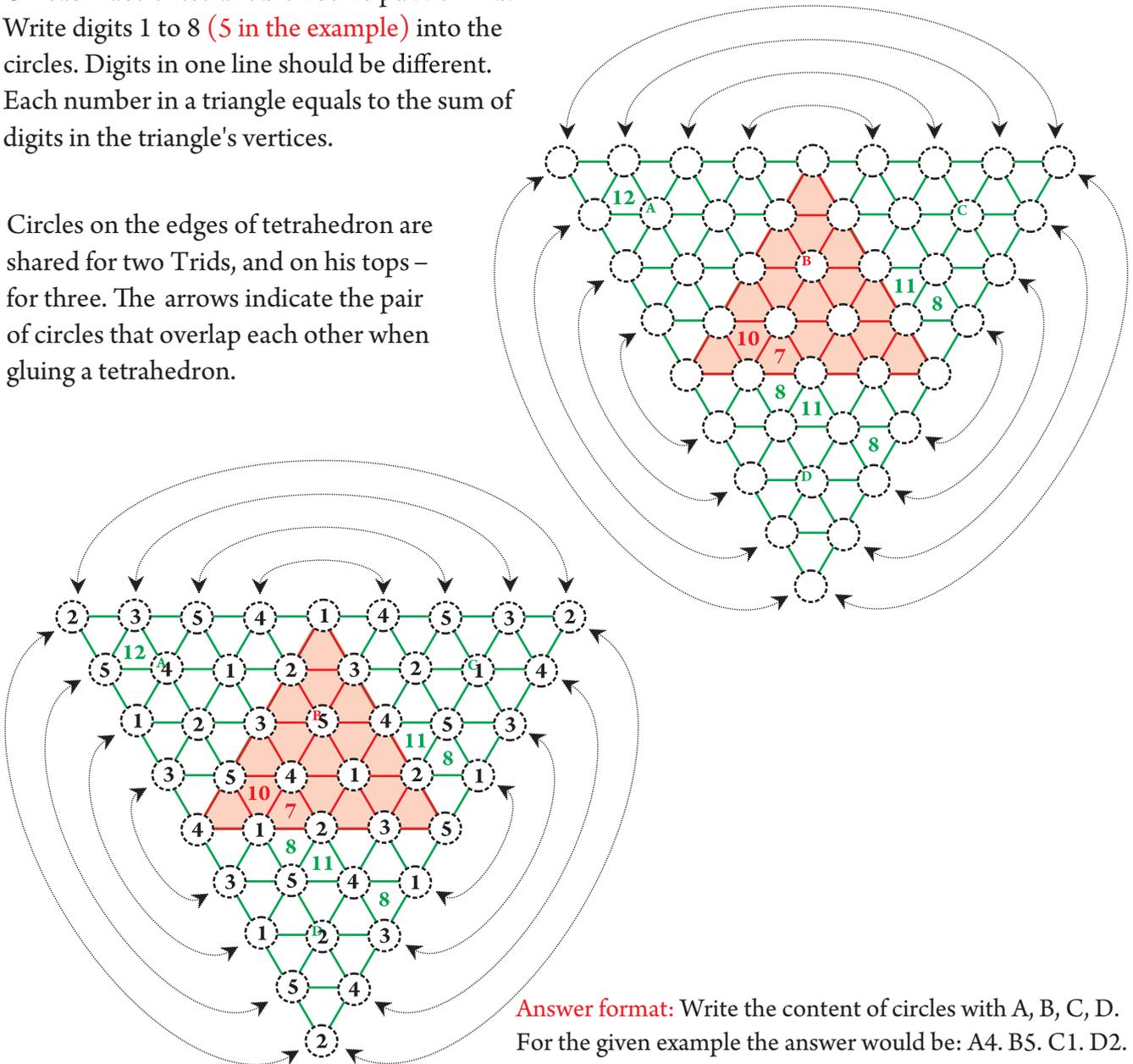
**Answer format:** Write the content of cells with A, B, C.  
For the given example the answer would be: A3, B8, C8.

### 9. TRID ON TETRAHEDRON

18 pt per each grid

On each face of tetrahedron solve puzzle Trid: Write digits 1 to 8 (5 in the example) into the circles. Digits in one line should be different. Each number in a triangle equals to the sum of digits in the triangle's vertices.

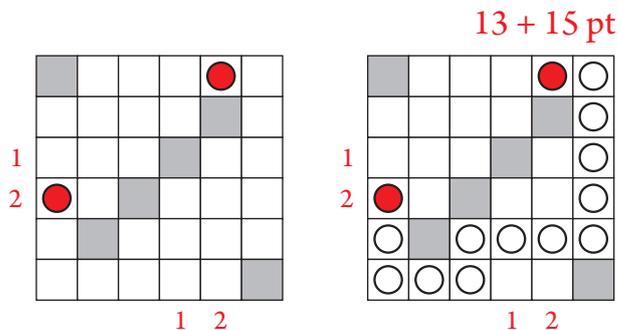
Circles on the edges of tetrahedron are shared for two Trids, and on his tops – for three. The arrows indicate the pair of circles that overlap each other when gluing a tetrahedron.



**Answer format:** Write the content of circles with A, B, C, D.  
For the given example the answer would be: A4. B5. C1. D2.

### 10. SNAKE

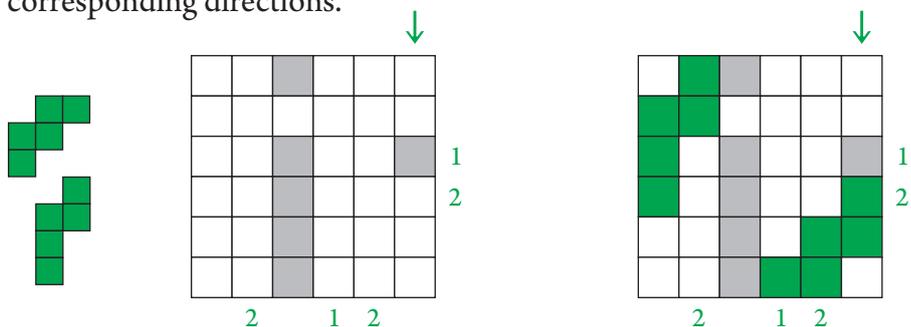
Locate in white cells a snake, 45 cells long (14 in the example), that travels horizontally and vertically without touching itself. Its head and tail are marked by circles. Numbers outside the grid indicate the amount of snake segments in corresponding directions.



**Answer format:** Write the number of snake turns.  
For the given example the answer would be: 5.

### 11. PENTOMINO

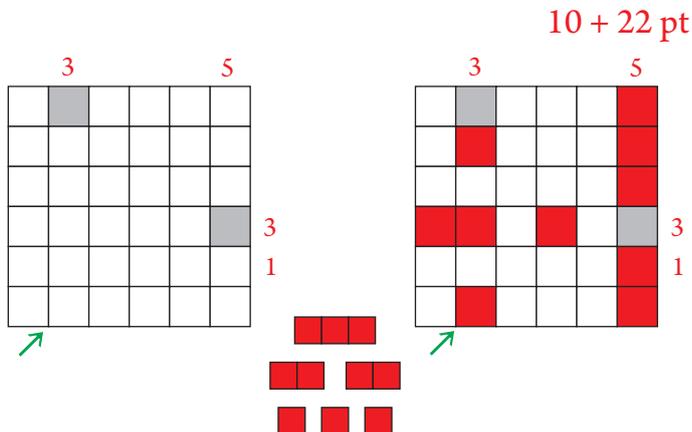
Place the given pentominoes in the white cells. Pentominoes may be rotated but not mirrored. They cannot touch each other, not even diagonally. Numbers outside the grid show how many cells are occupied by the pentominoes in corresponding directions.



**Answer format:** Write the content of marked column from top to bottom. Use "P" for cells which occupied by the pentaminoes, "-" for each other cell.  
For the given example the answer would be: ---PP-.

### 12. FIVE SHIPS

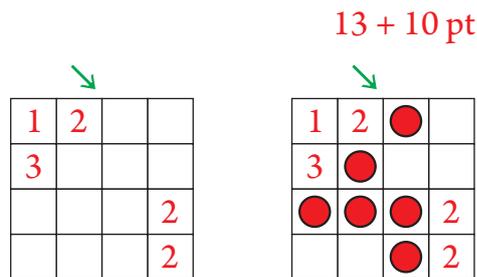
Place the given fleet in the white cells. Ships may be rotated. They cannot touch each other, not even diagonally. Numbers outside the grid show how many cells are occupied by the ships in corresponding directions.



**Answer format:** Write the dimensions of all ships in marked diagonal from bottom to top.  
For the given example the answer would be: 113.

### 13. MINESWEEPER

Locate the given mines in the grid, one mine per cell. Its cannot occupy cells with digits. Each number in the grid show how many mines are located in the horizontally, vertically and diagonally adjacent empty cells.



**Answer format:** Write the quantity of mines in marked direction.  
For the given example the answer would be: 1.

